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The United States of America

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Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this

United States Patent

Grants to the person or persons having title to this patent the right to exclude others from making, using or selling the invention throughout the United States of America for the term of seventeen years from the date of this patent, subject to the payment of maintenance fees as provided by law.

Harry F. Manbeck, Jr.

Commissioner of Patents and Trademarks

Linda D. Elliott

Attest

United States Patent [19]

Coates

[11] Patent Number: 5,045,704

[45] Date of Patent: Sep. 3, 1991

[54] METHOD FOR DETERMINING ABSOLUTE REFLECTANCE OF A MATERIAL IN THE ULTRAVIOLET RANGE

[75] Inventor: Vincent J. Coates, Palo Alto, Calif.

[73] Assignee: Nanometrics Incorporated, Sunnyvale, Calif.

[21] Appl. No.: 473,649

[22] Filed: Feb. 1, 1990

[51] Int. Cl.[5] G01J 1/42

[52] U.S. Cl. 250/372; 356/445; 356/448

[58] Field of Search 250/372; 356/445, 448, 356/51

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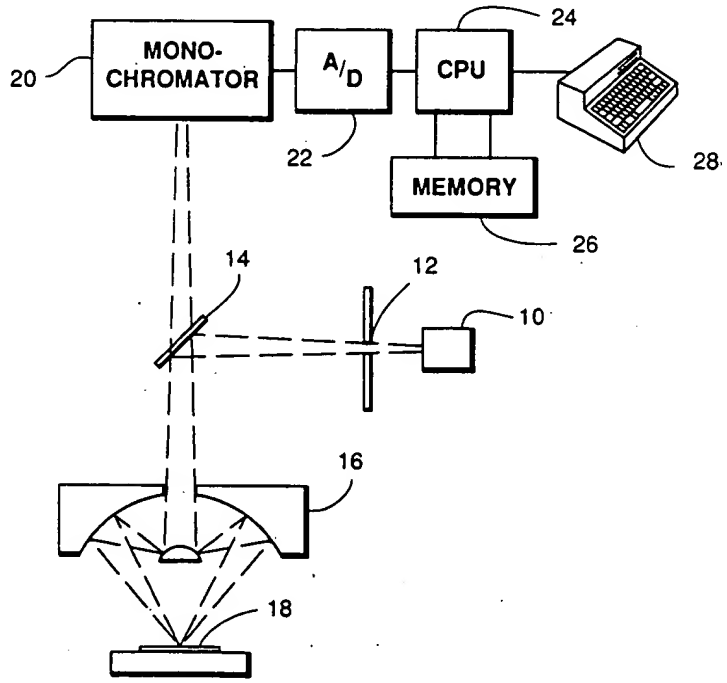
Primary Examiner—Carolyn E. Fields
Assistant Examiner—Drew A. Dunn
Attorney, Agent, or Firm—Linval B. Castle

[57] ABSTRACT

A method for determining a value of absolute reflectance of a material at a predetermined wavelength, in the ultraviolet range from its measured reflectance which includes system losses contributed by optics, illumination sources, detectors, etc. The method involves the measurement of reflectance from a known material such as single crystal silicon whose absolute reflectance is well known, dividing the measured value by the absolute value to obtain a system efficiency coefficient at the known wavelength and then, without changing the illumination or optics, measuring the reflectance of the unknown material and applying this coefficient to this measured value to obtain its absolute value.

5 Claims, 1 Drawing Sheet



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March 8, 2004